Group Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Question 1: Find the perimeter of a rhombus with diagonals 32 and 60**

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**Question 2: Find the altitude of a trapezoid with sides, respectively,**

**61, 90, 61, and 112**

Group Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Question 3: Two vertical poles in a field are 20 and 30 meters high. Wires are connected from the top of each pole to the bottom of the other. If the field is perfectly level, and the poles are 50 meters apart, how far above the ground do the wires cross?**

Group Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Question 4: The three diagonals on the faces of a rectangle box are 10, 8 and 12. Find the length of the longest edge.**

Group Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Question 5: Use the diagram and the following given information to find the four lengths. SRTP is a rectangle. , , V is the midpoint of , M is the midpoint of . ,  and . Find…**

**PR = \_\_\_\_\_\_\_\_ PW = \_\_\_\_\_\_\_\_\_\_\_ KV = \_\_\_\_\_\_\_\_\_ VW = \_\_\_\_\_\_\_\_\_**

W

R

T

S

V

K

P

Group Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Question 6: The medians to the two legs of a right triangle are  and . Find the hypotenuse of the right triangle.**

Group Names:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Question 7: My backyard is a square that is twenty meters on each side. In the backyard I have a circular garden that extends so that it is just touching (tangent) to each side of the yard. In the center of the garden is a square patch of roses so big that each corner of the square touches a side of the garden. How much area in my garden is not being used for roses…(I love roses!)**